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34. *STYLIDIUM TENELLUM* SWARTZ (STYLIDIACEAE) — A NEW RECORD FOR SOUTH INDIA

The family Stylidiaceae is very closely related to Campanulaceae and Lobeliaceae (Backer and Brink 1963-65) and is of special phyletic interest because of the peculiar gynostemium. Its members are distinguished from other related families by reduction in stamen number, adnation of the stamen to style and the extrorse anthers. The family has five genera with about 150 species in tropical Asia, Australia, New Zealand and temperate South America. The genus *Stylidium* Swartz (1805) was conserved over *Candollea* Labill (1805) and since this is the type genus of the family, the name of the latter was changed from Candoleaceae to Stylidiaceae (Lawrence 1951). If *Donatia* Forst. of which the systematic position is not at all clear is included, four genera are confined to Australia, Tasmania, New Zealand and Magellan region of South America. *Stylidium* is almost entirely Australian but a few species occur in Malaysia, Sri Lanka and continental Asia (Hooker 1885). Two species of *Stylidium*, very similar to certain intra-tropical ones, were found by Koenig—*S. uliginosum* in Sri Lanka and *S. tenellum* in Malacca. Two additional species are encountered in Dr Wallich's Catalogue, *S. wightianum* from peninsular India and *S. kunthii* from Khasi hills, Silhet, showing as in many other instances, the spreading of species into congenial climates beyond what at first appeared the natural limits of an order (Royle 1970, Kanjilal 1939).

According to Babu (1977) there are two species of *Stylidium* (*S. tenellum* Sw. and *S. kunthii* Wall.) in India, confined to eastern India with one extending to sub-Himalayan tracts. Babu (loc. cit.) has collected *S. tenellum* from grassy localities in the sal *Shorea robusta* forest in Rajpur and has reported it to be rare. These two species have also been reported earlier from Bihar and Orissa (Haines 1921-1924); and *S. tenellum* var. *minima* Clarke from Chhotanagpur (Prain 1963).

We are reporting for the first time the occurrence of *S. tenellum* from south India and have collected the specimens from Devarayanadurga while carrying out

floristic explorations in Tumkur district, Karnataka, since 1985. The description of the plant is given below:

Stylidium tenellum Sw. Mag. Ges. Naturf. Fr. Berlin 1: 51. t. 2 + 3, 1807 (non R. Br. 1810); Hook. f. F.B.I. 3: 420, 1885; Mildbraed, Pfreich. 35: 35. 1908; Ridley, Fl. Malay peninsula 2: 197. 1923; Haines, Botany of Bihar & Orissa part iv, 499. 1921-24; Soot. Fl. Males. ser. 1. 4: 530. 1954; Babu, Herb. Fl. Dehra Dun, p. 291. 1977.

Very small slender herb, glabrous, branched, branches filiform, stems dark brown or copper brown; leaves mostly basal, alternate, basal leaves mostly spatulate or linear or ovate, 3-nerved, nerves visible only on the upper surface; flowers solitary, minute, sessile in the axils of leafy bracts, zygomorphic, epigynous; base of the flower glandular; sepals 5, linear, subequal, rotately spreading, persistent in the fruits, lower lobes fused to 1/4 length; corolla strongly bilabiate, two of them prominent and ray-like, lobes divided, corolla tube minute; stamens 2, filaments united into a column, column slightly bent to one side, anther lobes 4, all equal, syngenaceous, stigma hairy; ovary inferior, well developed; capsule linear, elongating in fruit, dehiscent along longitudinal sutures; seeds powdery, minute, surface light brown, smooth, more or less angled.

Coll.: V. Bhaskar and C.G. Kushalappa 1944, 20 October 1986; 2079a, 10 December 1987, Devarayanadurga, Tumkur dist., Karnataka (Figs. 1 and 2).

This delicate herb occurs in moist grassy places at the foot of the hill during rainy season. The plants are so inconspicuous in stature (5-8 cm) that one may miss them completely or mistake them for most common utricularias. *Rotala ilecebroides*, *Lindernia*, *Bergia*, *Canscora diffusa*, *Xyris*, *Commelina* and *Eriocaulon* form the other chief associates. However, they may be distinguished by their copper brown tinged stem, pink or rose coloured flowers and the peculiar gynostemium with 2 stamens connate with style and extrorse anthers

at summit of column and the inferior ovary. The column (or trigger) is a sensitive part moving elastically on touch to rest between labellum and posterior lobes before resetting. Hence these plants have been named trigger plants (Brickson 1958).

Stylidium tenellum was collected consecutively during 1986 and 1987 but only from a small patch in Devarayanadurga and was not found in any other location in the district. Considering the restricted occurrence in south India it would be interesting to study the dispersal mechanism and geographical

distribution of these plants.

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35. *PARTHENIUM HYSTEROPHORUS* LINN. — A NEW RECORD FOR NEPAL

On the way to Kathmandu from Birganj in July 1989, I located an American weed, *Parthenium hysterophorus* Linn., a member of the family Compositae, growing on either side of the road. Subsequently, I collected this weed from Kathmandu proper. On critical examination of the available literature on the flora of Nepal (including Flora of Kathmandu Valley, 1986), it was found to be a new record for the flora of Nepal.

It is probably a migrant from India. A number of publications and discussions have already been made on its introduction and occurrence in India. The recent two review articles by Bennet *et al.* (1978, *Indian J. Forest* 1: 128-131) and Naskar and Guha Bakshi (1985, *J. Econ. Tax. Bot.* 7: 741-748) may be referred for further details.

The specimens of *P. hysterophorus* collected from Kathmandu have been housed in the Herbarium of Post Graduate Centre of Botany, Gaya College, Gaya. This is the first report of its occurrence in Nepal. A short description, citation, distribution, toxic effects, phenology, common names of this taxon have been given below to facilitate easy identification.

Parthenium hysterophorus Linn., Sp. Pl. 988. 1753; Hill, Veget. Syst. 3: t. 21.1761; Hoffmann in

Engler & Prantl, Nat. Pfam. 4 (5): 114. 1889; Rao, J. Bombay nat. Hist. Soc. 54: 218. 1956; Reed, Phytologia 10: 338. 1964; Mahesh., Curr. Sci. 35 (7): 181. 1966; Vaid & Naithani, Ind. For. 96 (10): 791. 1970; Adams, Fl. Pl. Jamaica 751. 1972.

An erect, profusely branched herb, up to 1.5 m tall. Stems longitudinally grooved, angular, hairy. Leaves alternate, 2-10 cm long and up to 5 cm broad, pinnately or bipinnately dissected; segments linear, entire, pubescent, acute; smaller and undivided in the region of inflorescence. Heads many-peduncled, in panicles, radiate, heterogamous. Involucral bracts biseriata; outer bracts 5, ovate, acute, prominently nerved; inner bracts 5, obovate, transparent, subtending a female floret with two male florets on either side. Receptacle flat, paleaceous. Outer florets: 5, female; inner few male. Female florets: jug-shaped, white; corolla cup-shaped with indistinct lobes enclosing style; stigma bifurcated. Inner florets: all male, yellowish; corolla infundibuliform; stamens exerted. Achenes obovate, black, crowned by persistent remnants of corolla, appendages and styles; pappus of 2 awns.

Distribution: A native of tropical America, from Florida to Texas. It has also been collected from the